


**CD-RW DRIVES AND DVD WRITERS**

CD-RW drives										Maximum read rate (kilobytes per second)	Maximum write rate (kilobytes per second)	Maximum rewriting rate (kilobytes per second)	CD-RW disc formatting	Dimensions (width x depth x height)	Weight	CD-R software	Packet-writing software
Details	Last month's position	First reviewed	Price (ex VAT)	Warranty	Internal/external	Interface type	Read/write/rewrite speed	Data buffer size	Average access time (milliseconds)								
<b>1</b> CyberDrive 32x12x48x 01256 707 070 www.cyberdrive.de	NEW	May 02	£90	1-year	internal	EIDE	48x/32x/12x	2MB	100ms	7,200KBps	4,800KBps	1,800KBps	15 minutes 20 seconds	149x207x43mm	1kg	Ahead Nero 5.5	InCD
<b>2</b> Plextor PlexWriter 24/10/40U 01932 828 828 www.plextor.be	NEW	May 02	£159	1-year	external	USB 2.0	40x/24x/10x	2MB	140ms	6,000KBps	3,600KBps	1,500KBps	24 minutes 53 seconds	161x247x55mm	1.7kg	Ahead Nero 5.5	InCD
<b>3</b> Memorex 24x10x40x 0870 727 1771 www.memorexlive.com	5	Feb 02	£107	1-year	internal	EIDE	40x24x10x	2MB	80ms	6,000KBps	3,000KBps	1,500KBps	32 minutes 7 seconds	146x196x40mm	1kg	EasyCD Creator	DirectCD
<b>4</b> Iomega CD-RW 16x10x40x 020 8365 9527 www.iomega.com	NEW	May 02	£189	1-year	external	USB 2.0	40x/16x/10x	2MB	100ms	6,000KBps	2,800KBps	1,500KBps	26 minutes 12 seconds	268x381x152mm	2kg	Hotburn	Hotburn
<b>5</b> Plextor PX-S88TU 01932 828 828 www.plextor.be	NEW	May 02	£219	1-year	external	USB 2.0	24x/8x/8x	2MB	140ms	3,600KBps	1,500KBps	1,500KBps	29 minutes 32 seconds	141x171x22mm	0.5kg	Ahead Nero 5.5	InCD

  

DVD writers										CD write formats	DVD write formats	Average access time (milliseconds)	Maximum capacity	Audio cable/mounting screws supplied	Drivers	Software
Details	Last month's position	First reviewed	Price (ex VAT)	Warranty	Internal/external	Drive type	Interface type	Data buffer size								
<b>1</b> Philips DVDRW208 0800 896 324 www.pcstuff.philips.com	NEW	May 02	£330	1-year	internal	DVD+RW/CD-RW	EIDE	2MB		CD-R, CD-RW	DVD+RW	120ms	4.7GB	Y/Y	Windows 95/98/2000/XP	Ahead Nero 5.5, Sonic MyDVD
<b>2</b> Pioneer DVR-A03 01753 789 500 www.pioneer-eur.com	NEW	May 02	£330	1-year	internal	DVD-RW/CD-RW	EIDE	2MB		CD-R, CD-RW	DVD-R/DVD-RW	180ms	4.7GB	Y/Y	Windows 95/98/NT/2000/XP/Mac	VOB Instant CD, Sonic MyDVD 2.3
<b>3</b> Panasonic DVD Movie Studio 0845 600 3535 www.piel.co.uk	NEW	May 02	£382	1-year	internal	DVD-RAM	EIDE	1MB		N/A	DVD-R/DVD-RAM	65ms	9.4GB	Y/Y	Windows 95/98/2000/XP	Veritas Primo DVD, Power DVD, Pinnacle Studio 7.0 SE, Pinnacle Express, Power VCR II
<b>4</b> HP dvd100i 0870 547 4747 www.hp.com	NEW	May 02	£329	1-year	internal	DVD+RW/CD-RW	EIDE	2MB		CD-R, CD-RW	DVD+RW	125ms	4.7GB	Y/Y	Windows 95/98/NT/2000/XP	HP MyDVD, HP DLA, HP RecordNow, HP SimpleBackup, PowerDVD, Sonic MyDVD
<b>5</b> Sony DRU110A 0870 511 1999 www.sony.com	NEW	May 02	£389	1-year	internal	DVD+RW/CD-RW	EIDE	2MB		CD-R, CD-RW	DVD+RW	120ms	4.7GB	Y/Y	Windows 95/98/2000/XP	B's Record Gold, B's Clip, Sonic MyDVD 3.0, WinDVD


**CD-RW DRIVES**
**1** CyberDrive 32x12x48x

Our new Best Buy, courtesy of CyberDrive, is the first 32-speed CD writer we've tested. While it would seem that writing speeds this high are hitting the theoretical limits possible with a compact disc, CyberDrive has managed to squeeze even faster times out of this internal EIDE drive. Formatting was supremely quick with the 48-/32-/12-speed (read/write/rewrite) drive, taking just 15 minutes 20 seconds – half the time we normally expect from an internal drive.

Meanwhile, CD-R and CD-RW burning times were also exceptional. CD-R burning was over almost before we noticed, taking just three minutes 10 seconds to write our 336MB mixed test files to a disc and four minutes 56 seconds to transfer a

single large file to a CD-R. Rewriting speeds were just as impressive: the CyberDrive took only four minutes 22 seconds to burn the same data to a CD-RW.

The software bundle is fairly standard; there's an abridged copy of Ahead

Nero 5.5 and InCD, to help you burn data to a CD-RW with minimum hassle. CyberDrive has also thrown in a CD-R and CD-RW disc to get you started. Furthermore, the drive comes incorporated with CyberDrive's ExaLink technology, which reduces the chance of buffer underruns which result in wasted CD-R discs. In addition, you're given all the necessary accessories, such as an audio cable and screws. The desire to push the limits of CD burning shows no sign of letting up and it's clear that CD-rewriters can go even faster yet. At just £90, this drive is a bargain, considering its speedy performance in our tests and good software bundle.

**2** Plextor PlexWriter 24/10/40U

Internal EIDE CD-RW drives used to rule the roost in terms of performance, but the high-speed USB 2.0 connection is helping external drives catch up. This interface is 40 times faster than its predecessor, USB 1.0, and it shows in the performance. The Plextor took four minutes 32 seconds to write our test files to a CD-R and five minutes 10 seconds to transfer the same files to a CD-RW. It's also quick at formatting discs, clocking in at just under 25 minutes. Like all Plextor drives, the PlexWriter features BurnProof technology to prevent wasted media. However, we were less impressed with the



NEW

design. To create the 24/10/40U,

Plextor simply seems to have taken a standard EIDE drive and added two plastic bands around the casing. But as long as you don't mind the unimaginative styling, it offers the best excuse yet to upgrade your system to USB 2.0. Like other Plextor drives, this is also capable of reading and writing multisession discs. At £159, it is a touch expensive, but for a device equipped with USB's high-speed interface the PlexWriter represents excellent value for money.

**3** Memorex 24x10x40x

This 40-/24-/10-speed (read/write/rewrite) drive features JustBurn buffer overrun technology to ensure that your valuable media doesn't get ruined. In tests the drive took six minutes 36 seconds to write 336MB of mixed files to a CD-R, which is the kind of speed we were getting from CD-RW drives six months ago. This unfortunately slow turn of speed keeps the Memorex from finishing higher in our chart. It also has a low 80ms

(milliseconds) average access time, which is the time the CD-RW drive takes to start reading the disc. Memorex includes Roxio EasyCD Creator, which does the job, but Ahead Nero 5.5 is generally considered the better package. DirectCD is supplied for rewriting jobs. Apart from this slight weakness, the Memorex comes with all the basic accessories, such as mounting screws and CD-R and CD-RW media. It also reads the majority of CD formats currently in existence, except BootCD. It's hard to complain when you consider that it retails for £107 – the Memorex is a cheap, reliable option for burning your own CDs.

**4** Iomega CD-RW 16x10x40x

When we first reviewed this USB 2.0 drive in March, its high price kept it from charting. However, with Teac and Philips discontinuing its drives, the Iomega slots in at number four this month. It is indeed a strong performer, the new data transfer format enabling it to write our mixed test files to a CD-R in just three minutes 27 seconds – faster than many current internal EIDE drives. Its





performance on CD-RWs was similarly impressive, clocking up four minutes 53 seconds to write the same files to a rewritable disc. Our only gripe is with the bundled Hotburn software, which Iomega has chosen to supply in place of the more usual Ahead Nero. While it's easy to use, this program lacks the advanced features of Nero. The high price of £189 prevents the Iomega from going higher up the chart, but the accelerated USB 2.0 format means this drive burns faster than a cupboard dowsed with petrol.

### 5 Plextor PX-S88TU

We weren't expecting fireworks from this 24-/eight-/eight-speed (read/write/rewrite) drive, but it took just six minutes 32 seconds

to write 336MB of test mixed files to a CD-R. This is undoubtedly due to Plextor's USB 2.0 interface, which can transfer data at 480Mbps (megabits per second) rather than the 12Mbps achieved by its predecessor. Cutting-edge design isn't something you associate with Plextor, whose reputation hinges on performance and reliability rather than good looks. But this sleek, silver-and-blue unit is the kind of peripheral that would make even a Mac user proud (not, of course, that it works with Macs). As befits a portable drive, the Plextor PX-S88TU is slim and lightweight, but it's also rather flimsy. By comparison, storage specialist La Cie sensibly designs its portable drives with rubber shock absorbers to protect against knocks in transit. Though it's expensive, the Plextor is a fast portable drive, and USB 2.0 looks set to be a high-speed interface to rival FireWire.



## DVD WRITERS

### 1 Philips DVDRW208

DVD offers a number of advantages over CD as a recordable medium, but it also has its problems. While there's only one DVD-ROM standard, there are a number of different writable and rewritable standards, all with their advantages and disadvantages. The DVD Forum (a consortium of manufacturers that produced the original DVD specification) approves DVD-R for write-once, DVD-RW for rewritable and DVD-RAM for data. DVD+RW is a rival format championed by a number of different manufacturers. This month we've weighed up the pros and cons of the different drives on the market in terms of features, price and performance.

Philips takes the top spot with the DVDRW208. This DVD+RW drive can store 4.7GB of data on a single-sided rewritable disc. The drive can also write CD-R and CD-RW media as well providing good flexibility. The main down side of DVD+RW at the moment is it only supports rewritable discs, which are more expensive than single-use writable media. Although there is the possibility of DVD+R emerging in the near future, it's not currently available.

Performance wise, the DVDRW208 was the fastest when it came to burning DVDs. Copying the February 02 edition of *PC Advisor* cover DVD – a total of 3GB – took just 17 minutes 58 seconds. The resulting disc would also happily play in a Philips consumer DVD player. Copying *PC Advisor's* October 00 cover CD-ROM – a total of 344MB – took four

and Sonic MyDVD for video authoring, providing everything you need to get going straight away. The DVDRW208 combines performance with a low price of £330, winning it the Best Buy award this month.

### 2 Pioneer DVR-A03

Pioneer has opted for the DVD Forum-approved route with the new entry DVR-A03, which offers DVD-R and DVD-RW capability along with CD-R and CD-RW.

DVD-R is a 4.7GB write-once medium, offering very good compatibility with consumer DVD players and DVD drives. DVD-RW offers the same 4.7GB in a rewritable disc, although compatibility isn't as good. The supplied VOB Instant CD/DVD software works well enough, however its operation feels a little less polished compared to that of Nero. Also bundled is Sonic MyDVD for video authoring.

Copying a 3GB DVD to DVD-R took 36 minutes 28 seconds, and the Philips DVD player had no problems playing the disc. Using DVD-RW the process took 41 minutes eight seconds, although the resulting disc failed to play in the consumer DVD player. That isn't to say that it won't play in any consumer DVD players, but it wouldn't play in ours. Copying the 344MB cover CD took five minutes 49 seconds for CD-R and 11 minutes 32 seconds for CD-RW.

The Pioneer DVR-A03 is a good solution if you want to take advantage of cheaper write-once disc, and require the added flexibility of rewritable and CD burning facilities. Unfortunately, you pay for it in performance.



minutes four seconds on CD-R and four minutes 53 seconds on CD-RW. Philips has bundled Ahead Nero 5.5 for data disc creation

### 3 Panasonic DVD Movie Studio

Panasonic bundles more than the other drive manufacturers in its DVD Movie Studio. Inside you'll find the LF-D311 drive, a FireWire card (so you can capture digital video), the SE version of Pinnacle's Studio 7.0 editing software, Pinnacle Express for video authoring, Power VCR, Power DVD and Primo DVD for data disc creation.

The LF-D311 can write DVD-R as well as DVD-RAM. DVD-RAM is a better solution for storing data, and also offers the largest capacity at 9.4GB for a double-sided disc. Unfortunately, however, there's no CD burning capability. Copying the 3GB cover DVD took 45 minutes 33 seconds to DVD-RAM and 43 minutes 15 seconds to DVD-R. The Philips DVD player had no problems playing the DVD-R disc. Since DVD-RAM isn't designed to be used in consumer DVD players (and is also housed in a caddy) we didn't test it for compatibility. The Panasonic is a good bundle, but was let down by its performance and lack of CD writing capability.



plus there's Sonic MyDVD for video. DLA (drive letter access) allows you to use a disc as a large floppy and there's also a copy of PowerDVD thrown in.

Copying the 3GB DVD took 34 minutes 38 seconds, and our consumer DVD player had no problems reading the disc. CD-R burning took a decent three minutes 58 seconds, while CD-RW took four minutes 45 seconds.

One thing we did find was the HP was a little fussy about the media it wrote to – failing once on both DVD+RW and CD-RW where other drives had no problems with the discs.

### 5 Sony DRU110A

In fifth place is the Sony DRU110A DVD+RW drive, also boasting CD writing facilities. The bundled software comprises B's Record Gold, B's clip (for packet writing), Sonic MyDVD and WinDVD. Although adequately functional, the B software seemed a little clunky compared to more well-known authoring packages.

Copying the 3GB DVD took 34 minutes 27 seconds, and the resulting disc played in our consumer DVD player. In terms of CD performance, CD-R writing took four minutes six seconds while CD-RW took four minutes 47 seconds. The DRU110A is a competent drive and delivered reasonable performance, however it is let down by its software bundle and doesn't score quite so well on value for money compared to drives from the competition higher up the chart.



### 4 HP dvd100i

HP's dvd100i is a DVD+RW drive with CD writing capabilities. A lot of attention has been paid to the bundled software, making it easy for the uninitiated. The advanced user, however, may find the interface somewhat limiting and yearn for the flexibility of a more complex package. RecordNow is for data disc production



## DVD in home entertainment

**W**riteable DVD makes sense for PC applications, but it's also set to replace the VCR in the home where the same format problems exist.

Panasonic's DMR-E20 DVD Video recorder can record on both DVD-R and DVD-RAM. The drive inside is basically the same as the company's DVD Movie Studio drive, currently at number three in our DVD drive chart. As the video data is compressed, the amount of time available on a disc depends on how tightly you pack the information. There are four modes offering from one to six hours on a single-sided 4.7GB disc – so you can record up to 12 hours on a double-sided 9.4GB disc.

The random access capabilities of DVD-RAM, however, allow you to do things that you simply can't do with tape. Recordings can be accessed instantly, and you can even do time shifting. Time shifting, a functionality that should become more and



more popular, basically involves recording and playing back at the same time – so you can pause a live broadcast and then pick up where you left off, similar to Tivo.

Philips also has a DVD Recorder, the DVDR1000, this time based on DVD+RW, allowing you to record TV or home movies directly to DVD.

The drives aren't cheap however – you're currently looking at around £1,000 for a unit, although prices should begin to come down over time.